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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,126

03/10/2004

Christian Cotteville

Q80242

2476

7590

08/30/2005

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EXAMINER

TRAN, HOANG Q

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

413

Office Action Summary	Application No.	Applicant(s)	
	10/796,126	COTTEVIEILLE ET AL.	
	Examiner	Art Unit	
	Hoang Tran	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/15/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. FR0302965 filed on March 11, 2003.

Information Disclosure Statement

The prior art documents submitted by applicant in the information Disclosure Statement filed on March 10, 2004 have all been considered and made of record (note the attached copy of form PTO-1449).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by the US Patent to Casiraghi (6,278,825B1).

In terms of Claim 1, Casiraghi teaches an optical fiber cable (Figure 1), at least one central strength member (Column 3 lines 25-30), at least one optical fiber (Column 3 lines 24), a metallic conductor surrounding said fiber (Column 3 lines 40-45), surrounding said conductor (Column 3 lines 40-45), a layer of insulative composition comprising mainly a mixture of polymers comprising at least one high density first polymer and low density second polymer which has a lower viscosity than said first polymer (Column 4 line 25-45).

As for Claim 3, Casiraghi teaches a cable according to Claim 1, wherein said first polymer is a high-density polyethylene and said second polymer is a low-density polyethylene (Column 4 lines 20-25 and Table 1).

As for Claim 6, Casiraghi teaches a cable according to Claim 1, wherein said insulative composition further contains additives (Column 5 lines 30-35).

As for Claim 7, Casiraghi teaches a cable according to Claim 1, wherein said first and second polymers are mixed by means of a two-screw extruder (Column 5 lines 65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 5, and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Casiraghi in view of the WIPO Patent Application Publication to Rogestedt (WO9703124A1).

With respect to Claim 2, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein said first polymer has a melt flow rate less than 6g/10 min. Rogestedt teaches a cable wherein the first polymer has a melt flow rate less than 6g/10 min (Page 8 line1) to find the optimal density configuration of the polymer mixture. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's first polymer melt flow rate

attribute to Casiraghi optical cable in order to manipulate different density of the polymer mixture to obtain better process ability.

With respect to Claim 4, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein the proportion of said second polymer is at most 20% by weight of said polymer mixture. Rogestedt teaches a cable wherein the proportion of said the polymers is at most 20% by weight of said polymer mixture (Page 4 line 10-15) to produce a cable with improved properties. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's polymer weight limitations of 20% to Casiraghi optical cable in order to produce a product with better properties such as ESCR, shrinkage, and mechanical strength.

With respect to Claim 5, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein the proportion of said second polymer is from 5%-20% by weight of said polymer mixture. Rogestedt teaches a cable the proportion of said the polymers is at most 20% by weight of said polymer mixture (Page 4 line 10-15) preferably 1-10% to produce a cable with improved properties. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's polymer weight limitations of 5%-20% of the polymer weight mixture to Casiraghi optical cable in order to produce a product with better properties such as ESCR, shrinkage, and mechanical strength.

With respect to Claim 10, Casiraghi teaches the cable according to Claim 1 and method of producing the cable in Claim 7. Casiraghi does not teach the method of

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producing an optical cable wherein the temperature profile along said extruder between the inlet and outlet is as follows: 100°C /160°C /180°C /200°C /200°C /210°C /215°C /220°C. Rogestedt teaches a method of producing an optical cable wherein the temperature profile along a twin-screw extruder is 100°C /°180°C /210°C (Example 1-4) to properly produce a mixture with certain characteristic. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's polymer temperature producing range to Casiraghi optical cable in order to find the optimal reaction condition of the mixture for manufacturing the optical fiber.

Claims 8 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Casiraghi in view of the US Patent to Camberlin (6,015,859).

With respect to Claim 8, Casiraghi teaches the cable according to Claim 1 and method of producing the cable in Claim 7. Casiraghi does not teach the method of producing an optical cable wherein the length of said extruder is equal to approximately 25 times its diameter. Camberlin teaches a method of producing thermoplastic polymers wherein the twin-screw extruder's length is 28 (Column 6 lines 30-35) times its diameter in order properly mix two polymers. It would have be an obvious matter of design choice to apply the teaching of Camberlin's length to diameter ratio to the method disclosed by Casiraghi, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In *re Rose*, 105 USPQ 237 (CPA 1955).

With respect to Claim 9, Casiraghi teaches the cable according to Claim 1 and method of producing the cable in Claim 7. Casiraghi does not teach the method of

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producing an optical cable wherein the rotation speed of said extruder is from 100 rpm to 200 rpm. Camberlin teaches a method of producing thermoplastic polymers wherein the rotation speed of said extruder is from 100 rpm to 200 rpm (Column 6 lines 60-65) to maintain a co-rotating and contra-rotating manufacturing condition. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Camberlin extruder rotation speed to Casiraghi method in order to maintain proper mixture condition of co-rotation from the extruder in the manufacturing process of the fiber.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Tran whose telephone number is 571-272-5049. The examiner can normally be reached on 9:00AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

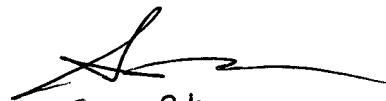
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ht



Hoang Tran
AU 2874
August 22, 2005



Sung R.K.
Patent Examiner
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